

5. On the Dates of the 'Encyclopédie Méthodique': Additional Note. By C. DAVIES SHERBORN and B. B. WOODWARD.

[Received March 27, 1899.]

To the 'Proceedings' of this Society, 1893, pp. 582-584, we contributed a note on the dates of this book: information has now come to hand which enables us to correct some doubtful points and to complete the information.

T. VIII. part 2, Insectes (livraison 77 of the Encyclopédie), was published in July 1812, not [? 1814]. Pp. 1-45 of T. VIII. pt. 1 was written by B. E. Manuel.

T. IX. part 2, Insectes (livr. 95), was published in July 1824. Of this part 2, pp. 329-706, 708-711 were by Godart; pp. 706, 707 and all extra-European Hesperides were by Latreille, to p. 793; from *Castnia* to end by Godart.

T. X. Insectes, came out in two parts as follows:—

Pt. 1, pp. 1-344. 1825 (livr. 96).

Pt. 2, pp. 345-832. 1828 (livr. 100).

Hist. Nat. des Zoophytes, by Lamouroux, Bory, and Eudes-Deslongchamps:

Pt. 1, pp. 1-376. 1824 (livr. 95).

pp. 377-819. Oct. 1827 (livr. 98).

Hist. Nat des Vers:

T. II. pt. 2 was published along with Vol. III. in Sept. 1832 (not 1831).

May 16, 1899.

W. T. BLANFORD, Esq., LL.D., F.R.S., V.P., in the Chair.

The Secretary read the following report on the additions to the Society's Menagerie during the month of April 1899:—

The total number of registered additions to the Society's Menagerie during the month of April was 87, of which 20 were by presentation, 6 by birth, 35 by purchase, and 26 were received on deposit. The total number of departures during the same period, by death and removals, was 87.

Amongst the additions the following are worthy of special notice:—

A young male Giraffe, believed to be about eleven months old, purchased of Mr. C. Reiche, of Alfeld, on April 1st. This Giraffe belongs to the Southern form, *Giraffa camelopardalis capensis* (cf. P. Z. S. 1897, p. 277), and was obtained by Mr. Reiche's agents in the Transvaal, probably from the adjacent district of Portuguese East Africa.

Four Masked Hawfinches (*Coccothraustes personatus*) from Japan, purchased April 7th, new to the Society's Collection.

Three female Ostriches of the Northern form (*Struthio camelus*), presented April 25th by G. Fanshawe Abadie, Esq., by whom they were brought home from the Niger. Mr. Abadie kindly informs me that these Ostriches were obtained from Sokoto, but were stated to have been captured in a district adjoining the eastern shores of Lake Tchad.

The Secretary read extracts from letters addressed to him by Mr. J. S. Budgett, F.Z.S., on the Society's Scientific Mission to the Gambia Colony. They were dated from M'Carthy's Island, March 22nd and April 18th last. The natives reported that as soon as the rains began on the upper river and the water to rise, the creeks and swamps would be flooded and pregnant *Polypteri* would enter them in swarms. Lung-fishes (*Protopterus*) would be found at this period of the year in similar situations. So far Mr. Budgett had only seen examples of two species of Antelope, which he believed to be a Gazelle and a Bushbok (*Tragelaphus scriptus*). Mr. Budgett had made various short excursions to Demfai, on the boundary of the British and French territories, and Alimaka in Kunchan Creek. At the latter place he had been very successful in fishing and had obtained examples of a very curious Mormyrid, with a cylindrical whip-like caudal appendage.

Mr. Budgett felt quite confident that he would obtain examples of the early stages of development of *Polypterus* by the end of June, and hoped to be at home in July. The unhealthy season did not begin till August.

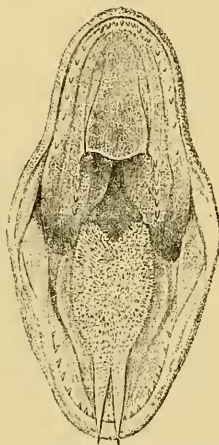
Mr. G. A. Boulenger exhibited a specimen of the Bornean Lizard *Lanthanotus borneensis*, belonging to the Sarawak Museum, for the loan of which he was indebted to the kindness of H. H. the Rajah of Sarawak.

Mr. Boulenger pointed out that, since the description of this curious type of Lizards by Steindachner in 1878, no second specimen was known to have reached Europe, and that, owing to the fact that the original description had been confined to the external characters, the exact systematic position of *Lanthanotus* had not been ascertained. The original describer had proposed to regard the genus as the type of a distinct family, *Lanthanotidae*, near the *Helodermatidae*, whilst the author of the 'Catalogue of Lizards' had placed it provisionally under the latter family.

By means of the Röntgen rays, thanks to the kind assistance of Messrs. Gardiner & Green, the principal osteological characters had been ascertained without cutting into the specimen now exhibited, with the result that the affinity of *Lanthanotus* to the *Helodermatidae* was fully confirmed. The structure of the skull, characterized by the presence of a postorbital arch combined with

the absence of a postfronto-squamosal arch, the slender clavicles, the absence of transverse processes to the interclavicle, together with the character of the tongue, settled the question beyond dispute. The sciagraph further revealed the fusion of the premaxillaries and of the parietals, which are devoid of a pineal foramen, the distinctness of the nasals and of the frontals, the presence of a small supratemporal, and the absence of a squamosal. The vertebræ numbered 103: 8 cervical, 26 dorsal, 1 lumbar, 2 sacral, 66 caudal. The first three dorsal vertebræ bore sternal ribs, as in *Varanus*, *Heloderma* having 4 sternal ribs. The phalanges, in both manus and pes, numbered 2, 3, 4, 4, 3; there was thus one phalanx less in the fourth digit and in the fifth toe than in *Heloderma* and *Varanus*.

The resemblance of the open mouth of *Lanthanotus*, as shown in the accompanying figure, to that of *Heloderma* was extremely



Open mouth of *Lanthanotus borneensis*.

striking. The teeth were similar in both genera, but they showed no traces of grooves in *Lanthanotus*. There were 7 teeth in the premaxillary bone, 12 in each maxillary, 12 in each ramus of the mandible. The palate was toothed as in *Heloderma*: one tooth on the palatine bone, four on the pterygoid. The tubercles on the head and body were devoid of ossifications. The lower eyelid was entirely occupied by a single semitransparent shield.

The specimen in the Sarawak Museum, a male, obtained in the Rejang River District in 1891 by the Hon. C. A. Bampfylde, was a little smaller than the type in the Vienna Museum. It had a total length of 310 millim., in which the head entered for 22 and the tail for 160; fore limb 30, hind limb 38.

Mr. G. E. H. Barrett-Hamilton, F.Z.S., exhibited a skin of the Varying Hare (*Lepus variabilis*) from Nairn, Scotland, for which he was indebted to the courtesy of the Earl of Cawdor. The skin was in the interesting moulting-stage of spring, and clearly showed that the darker colour of summer was due to the casting off of the white hairs of winter and their replacement by a new set of hairs of the dark summer colour. Mr. Barrett-Hamilton was therefore glad to be able to corroborate the observations of Mr. J. A. Allen¹ on the American White Hare (*Lepus americanus* Erxl.), at least so far as concerned the spring change of colour. Mr. Allen's paper had been written partly with a view to combat the view, which once widely held, that the change of colour in the Varying Hare was due, at least in part, to an actual change of the pigment of the hairs, which theory had been advocated in an elaborate paper by Assistant-Surgeon F. H. Welch², and had been largely utilized by no less an authority than Mr. E. B. Poulton as the chief basis for his theory on the "Variable Protective Resemblances in Vertebrates"³.

Another point of interest was the late date at which the spring moult takes place (the Hare in question was received early in May). The date of the spring moult in the more southern countries inhabited by the Variable Hare, such as the South of Ireland, was no earlier, so that the spring change at all events was apparently unaffected by climatic conditions, although in the south the amount of whiteness assumed was very much less than in the north.

The whole seasonal change in fact seemed to be normally quite out of control of the animal, and also, it seemed, not subject to the direct influence of the weather (at least not to such changes of temperature as might be experienced in different parts of the British Isles), the experiments of Captain Ross⁴ on a Hudson's Bay Lemming notwithstanding; and Mr. Barrett-Hamilton was aware of several instances in which Variable Hares transported from Scotland and from Irish mountains to southern and low-lying regions continued for some seasons to appear in their northern garb of snowy whiteness. This persistence of the habit of turning white, even in unsuitable conditions, together with the lateness of the moult, resulted frequently in the curious spectacle of a mountain Hare running about in all its conspicuous arctic livery under the bright rays of an April or May sun. After a few years such imported Hares, or more probably their offspring, ceased to turn completely white, and the breed assumed the appearance of the ordinary Hares of the southern locality to which they had been transported. The persistence of this change even under unsuitable conditions, together with the lateness of the spring moult (owing to

¹ "On the Seasonal Change of Colour in the Varying Hare (*Lepus americanus* Erxl.)." Bull. Amer. Mus. Nat. Hist. vol. vi. art. iv. pp. 107-128, May 7, 1894.

² P. Z. S., 1869, pp. 228-236.

³ See 'The Colours of Animals,' chap. vii. Intern. Sci. Ser. vol. lxvii. 1890.

⁴ See Appendix to Second Voyage, p. xiv (1835), and 'Bell's British Quadrupeds,' ed. i. p. 199 (1874).

which an animal that had turned white in southern regions was during the spring a very conspicuous object), and the occasional turning white of individuals in southern regions where the white-turning habit had long since been dropped by the majority of the species, was, especially among Stoats, in Mr. Barrett-Hamilton's opinion, the cause of the numerous reported instances¹ of the assumption of white in mild winters in England. Both these phenomena, *i. e.* the late moult and the tendency of solitary individuals of non-white-turning races to revert to the white-turning habit, were, at first sight, of apparently little use, or perhaps even dangerous to the species in question. On further consideration, however, it appeared that their utility was probably to be found in the opportunity afforded by their means of adaptation to changed climatic conditions; it being obvious that, in countries where an animal, if it turned white in winter, would have to go about in that conspicuous garb for some time after the disappearance of all snow and frost, those individuals which turned less white than their companions would have a better chance of surviving, and so would become (as is the case in southern countries) the dominant feature of the race; whereas the occasional individual reappearance of the white-turning habit gave an opportunity to the species for its general reassumption, should climatic conditions become more severe.

Mr. Allen had pointed out that in *Lepus americanus* the spring moult "occurs quite as early and proceeds just as rapidly (if not a little more so) in the females as in the males, and that the moult is practically completed before the young are born" (*op. cit.* p. 122): but Mr. Barrett-Hamilton stated that the latter part of this statement was not true for the south of Ireland, where the Variable Hare was still in winter-coat in early May, whereas its young were usually born at a very much earlier date, the exact date of their birth depending almost entirely on the weather.

Mr. E. M. Corner read a note on the variations of the patella in the Divers, Grebes, and Cormorants, by which, as he believed, the functions of the bones in these birds might be explained.

A communication was read from Marquis Ivrea on the Wild Goats of the Ægean Islands. A series of heads and some photographs of the Goats of the islands of Antimilo and Joura were exhibited, with the object of showing that the effect of a cross between *Capra agagrus* and *C. hircus* (such as had been proved to have occurred on the former island) was not to produce an animal corresponding to *C. dorcas* (Reichenow), and that consequently the Goat of Joura had not, as was generally assumed, been so produced, but was, as a matter of fact, a local variety of the Wild Goat, for which the name *C. agagrus*, var. *jourensis*, was suggested.

¹ See various communications to the 'Field.'

Mr. G. A. Boulenger, F.R.S., read an account of the Fishes obtained by the Congo Free State Expedition, under Lieutenant Lemaire, in Lake Tanganyika, in 1898. Ten new species were described, of which three were made the types of new genera.

This paper will be printed in full in the Society's 'Transactions.'

The following papers were read :—

1. Notes on a Second Collection of Reptiles made in the Malay Peninsula and Siam, from November 1896 to September 1898, with a List of the Species recorded from those Countries. By STANLEY SMYTH FLOWER, F.Z.S., 5th Fusiliers.

[Received April 14, 1899.]

(Plates XXXVI. & XXXVII.)

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Part I.—INTRODUCTORY.

Malay Peninsula Reptiles.—In the Proceedings of this Society for 1896, pp. 856–914, there appeared a paper giving an account of the Reptiles and Batrachians that I had collected in the Malay Peninsula from March 1895 to April 1896, and a list of the species recorded from that neighbourhood by Cantor, Stoliczka, and others. That list included 176 species of Reptiles, of which 9, viz., *Dermochelys coriacea*, *Hardella thurgi*, *Cyclemys dhor*, *Tropidonotus subminiatus*, *Macrocalamus lateralis*, *Hypsirhina indica*, *Hydrophis nigrocinctus*, *Aipysurus edyouxi*, and *Amblycephalus levis* were of doubtful occurrence in the region. In the present list 3 of the doubtful species are recorded for certain, viz., *Dermochelys coriacea*, *Macrocalamus lateralis*, and *Aipysurus eydouxii*; 9 more species are added, viz., *Geomyda grandis*, *Testudo elongata*, *Gymnodactylus marmoratus*, *Mabuia rugifera*, *Lygosoma maculatum*, *Zaocys fuscus*, *Coluber tæniurus*, *Hypsirhina bocourti*, and *Hydrophis gracilis*; *Gonatodes penangensis* becomes a synonym of *G. affinis*; and the names of *Hemidactylus gleadowii* and *Lygosoma jerdonianum* are changed to *H. brooki* and *L. atrocristatum* respectively: thus making a total of 184 species.

Only one genus, *Macrocalamus*, is peculiar to the Peninsula, and 6 species, viz., *Gonatodes affinis*, *Lygosoma singaporense*, *Cylindrophis lineatus*, *Macrocalamus lateralis*, *Calamaria albiventer*, and *Hypsirhina indica*.

Siamese Reptiles.—So far as I am aware, only one paper has yet